

## BOOK REVIEWS

DESERT AEOLIAN PROCESSES edited by V. P. Tchakerian, Chapman and Hall, London, 1995. No. of pages: xiv + 326. Price: £45.00. ISBN 0-412-04241.

This multi-authored book is the most recent in a line of conference volumes published in the last ten years dealing with aeolian geomorphology, and beginning with the book with that title edited by Bill Nickling in 1986. Like that volume, this one stems from a conference in North America, containing papers given at the 1992 Association of American Geographers meeting. Thirty-seven authors contribute to 14 papers in Tchakerian's volume, covering a range of themes with a strong United States orientation. Eight of the papers are the result of research into aeolian processes and landscapes in the U.S., and although some of these are predominantly regional in emphasis, all contain developments, data and interpretations that add to the evergrowing font of aeolian knowledge.

The editor's own contribution is as co-author of one of the research papers, and as author of an introductory chapter that explains the resurgence of aeolian geomorphology in the late twentieth century. Measuring the history of research with a new absolute chronology, the Bagnoldian scale, Tchakerian spells out nine reasons for the recent rebirth of the study of the geomorphological role of wind. This chapter is succinct and will be a useful teaching reference.

Of the other 13 chapters, two deal with aeolian dust, two with wind erosion (specifically ventifacts) and one with aeolian modification of glacial moraines by sediment inputs and erosion. In fact, one of the papers on erosion, by Dorn, actually deals with the development of ventifacts on moraines and their potential use in relative dating, so that two papers are in the field of glacio-aeolian studies. The remaining papers all concern facets of sand transport and dune geomorphology. With the exception of the paper by Tsoar *et al.* on the changing character of linear dunes in the Sinai–Negev desert, which combines remote sensing and field study, all are from North America, but cover a range of

issues. Two concern the origin of sediment sources of specific North American sand seas, using geomorphological or geochemical techniques, and one provides an update on earlier work concerning the movement of barchan dunes in the Salton sand sea. While the combined data in this case cover an impressive 40 year period, it is somewhat odd that data terminate in 1981. One of the Salton barchans is subjected to detailed analysis of process and morphology in a further paper, by Mulligan.

A valuable paper by ten authors, fronted by Greeley, uniquely and innovatively utilizes radar remote sensing to assess the elusive  $z_0$  over a range of natural desert surfaces in the U.S. If only we all had NASA in our cupboard of field equipment! Slightly fewer researchers contribute to another valuable paper combining field and remote sensing methods to determine sand transport pathways through the undulating terrain of the Mojave, describing on the way sand ramps, which are a potentially valuable source of palaeo-environmental information, given their combination of aeolian and slope deposits and palaeosols.

The collected papers in *Aeolian Geomorphology* demonstrate the diversity of themes, methods and issues dealt with by researchers interested in the way the wind shapes the landscape of drylands, and the vibrancy of the aeolian research agenda, which has matured into a dynamic and leading field within geomorphology. As for the book itself, though some of the papers are more novel and innovative than others (almost inevitable in a conference-derived volume), there is not a dud amongst them. Resorting to that favourite cliché of reviewers of such volumes, it may be relatively expensive and specialized, but it deserves a place on the library shelves. I will certainly be adding some of the papers to my teaching reading lists, while I have also gained some ideas for my own research.

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REGOLITH, SOILS AND LANDFORMS by Cliff Ollier and Colin Pain, John Wiley & Sons, Chichester, 1996. No. of pages: viii + 316. Price: £65.00 (hb). ISBN 0-471-96121-3.

This would seem to be the first book to provide a wide-ranging synthesis of the relationships amongst regolith, soils and landforms. Its authors have both been researching in this field for many years; Cliff Ollier is well known for his books *Weathering, Tectonics and Landforms* and *Ancient Landforms*, and Colin Pain has long worked on regolith and soils and is currently head of the Regolith Discussion Group

at the Australian Geological Survey Organisation. Thus, the authors are well qualified to write such a book. However, is there a need? A demand certainly seems to exist for synthesising information from a wide range of disciplines, and in this respect there is probably a need for a synthesis of regolith and landforms.

In general, this book satisfies this requirement, but with some reservations. The best chapters, such as those on 'Landforms and surficial sediments', 'Stratigraphy and age of the regolith', 'Tectonics and models of landscape evolution', 'Ores and geochemical exploration' and 'The big picture – regolith in the geosystem', are those where the book